

Subt. For, PTO-1449		Docket Number 112020.127 NAN-4	Application Number 10/033,323
INFORMATION DISCLOSURE IN AN APPLICATION  (Use several sheets if necessary)		Applicant Thomas Rueckes et al.	
		Filing Date December 28, 2001	Group Art Unit <del>2818</del> 2824
Sheet	1	OF	21

U.S. Patent Documents						
EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
CW	5,346,683	09/13/94	Green et al.	423	447.2	
	5,424,054	06/13/95	Bethune et al.	423	447.2	
	5,456,986	10/10/95	Majetich et al.	428	403	
	5,482,601	01/09/96	Ohshima et al.	204	173	
	5,547,748	08/20/96	Ruoff et al.	428	323	
	5,626,812	05/06/97	Ebbesen et al.	264	248	
	5,716,708	02/10/98	Lagow	428	408	
	5,753,088	06/19/98	Olk	204	173	
	5,780,101	07/14/98	Nolan et al.	427	216	
	5,903,010	05/11/99	Flory et al.	257	24	
	5,925,465	07/20/99	Ebbesen et al.	428	408	
	5,928,450	07/27/99	Russell	156	169	
	5,946,930	09/07/99	Anthony	62	293	
	5,973,444	10/26/99	Xu et al.	313	309	
	5,985,446	11/16/99	Lagow	428	367	
	5,993,697	11/30/99	Cohen et al.	252	502	
	6,031,711	02/29/00	Tennant et al.	361	303	
	6,060,724	05/09/00	Flory et al.	257	24	
	6,063,243	05/16/00	Zettl et al.	204	164	
	6,083,624	07/04/00	Hiura	428	408	
	6,105,381	08/22/00	Ghoshal	62	259.2	
	6,136,160	10/24/00	Hrkut et al.	204	192.16	
	6,146,227	11/14/00	Mancevski	445	24	
	6,156,256	12/05/00	Kennel	264	461	
	6,183,714 B1	02/06/00	Smailey et al.	423	447.3	
	6,203,814 B1	03/20/01	Fisher et al.	424	443	
	6,203,864 B1	03/20/01	Zhang et al.	427	592	
	6,221,330 B1	04/24/01	Moy et al.	423	447.3	
	6,231,744 B1	05/15/01	Ying et al.	205	324	
	6,231,980 B1	05/15/01	Cohen et al.	428	402	
	6,232,706 B1	05/15/01	Dai et al.	313	309	
CW	6,239,547 B1	05/29/01	Uemura et al.	313	495	

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EXAMINER <i>Christa W. W.</i>	DATE CONSIDERED <i>3/11/2004</i>
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Sheet	2	OF	21				

cdw	5,196,396	03/23/93	Lieber	505	1	
	5,252,835	10/12/93	Lieber et al.	250	492.1	
	5,840,435	11/24/98	Lieber et al.	428	698	
	5,897,945	04/27/99	Lieber et al.	428	323	
	5,997,832	12/07/99	Lieber et al.	423	249	
	6,036,774	03/14/00	Lieber et al.	117	105	
	6,159,742	12/12/00	Lieber et al.	436	164	
	6,190,634 B1	02/20/01	Lieber et al.	423	439	
	5,590,078	12/31/96	Chatter	365	189.01	
	5,799,209	08/25/98	Chatter	395	876	
	5,838,165	11/17/98	Chatter	326	38	
	6,108,725	08/22/00	Chatter	710	56	
	6,138,219	10/24/00	Soman et al.	711	149	
	6,212,597 B1	04/3/01	Conlin et al.	711	105	
	6,237,130 B1	05/22/01	Soman et al.	716	10	
	4,853,893	08/01/89	Eaton, Jr. et al.	365	145	
	4,888,630	12/19/89	Paterson	357	23.5	
	5,198,994	03/30/93	Natori	365	145	
	5,444,421	08/22/95	Carroll et al.	331	111	
	5,479,172	12/26/95	Smith et al.	342	51	
	5,517,194	05/14/96	Carroll et al.	342	50	
	5,521,602	05/28/96	Carroll et al.	342	50	
	5,533,061	07/02/96	Smith et al.	375	334	
	5,553,099	09/03/96	Carroll et al.	375	334	
	5,608,246	03/04/97	Yeager et al.	257	295	
	5,626,670	05/06/97	Varshney et al.	117	7	
	5,802,583	09/01/98	Yeager et al.	711	152	
	5,850,089	12/15/98	Varshney et al.	257	295	
	5,850,231	12/15/98	Orimoto et al.	345	507	
	5,909,624	06/01/99	Yeager et al.	438	396	
	6,025,618	02/15/00	Chen	257	295	
	6,044,008	03/28/00	Choi	365	145	
	6,128,214	10/03/00	Kuekes et al.	365	151	
cdw	6,159,620	12/12/00	Heath et al.	428	615	

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Applicant  
Thomas Rueckes et al.

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December 28, 2001

Group Art Unit  
~~2818~~ 2824

Sheet 3 OF 21

CDW	6,198,655 B1	03/06/01	Heath et al.	365	151	
	5,198,390	03/30/93	MacDonald et al.	437	203	
	5,316,979	05/31/94	MacDonald et al.	437	203	
	5,426,070	06/20/95	Shaw et al.	437	203	
	5,640,133	06/17/97	MacDonald et al.	333	197	
	5,719,073	02/17/98	Shaw et al.	437	228	
	5,846,849	12/08/98	Shaw et al.	438	52	
	5,847,454	12/08/98	Shaw et al.	257	734	
	5,878,840	03/09/99	Tessum et al.	182	229	
	5,914,553	06/22/99	Adams et al.	310	309	
	5,939,785	08/17/99	Klonis et al.	257	729	
	6,051,866	04/18/00	Shaw et al.	257	417	
	6,259,277 B1	07/10/01	Tour et al.	326	136	
	5,640,343	06/17/97	Gallagher et al.	365	171	
	5,650,958	06/22/97	Gallagher et al.	365	173	
	5,793,697	08/11/98	Scheuerlein	365	230.07	
	5,841,692	11/24/98	Gallagher et al.	365	173	
	5,930,164	07/27/99	Zhu	365	158	
	5,946,228	08/31/99	Abraham et al.	365	173	
	6,052,263	04/18/00	Gill	360	113	
	6,072,718	06/06/00	Abraham et al.	365	173	
	6,104,633	08/15/00	Abraham et al.	365	171	
	6,166,948	12/26/00	Parkin et al.	365	173	
	6,219,212 B1	04/17/01	Gill et al.	360	324.2	
	4,701,842	10/20/87	Olnowich	364	200	
	4,985,871	01/15/91	Catlin	365	230.06	
	5,161,218	11/03/92	Catlin	395	425	
	5,184,320	02/02/93	Dye	365	49	
	5,412,785	05/02/95	Skruhak et al.	395	375	
	5,586,286	12/17/96	Santeler et al.	395	432	
	5,608,888	03/04/97	Purcell et al.	395	412	
	5,623,638	04/22/97	Andrade	395	494	
	5,651,126	07/22/97	Bailey et al.	395	401	
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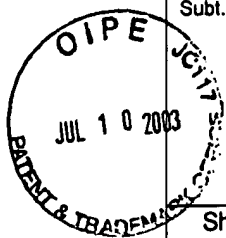
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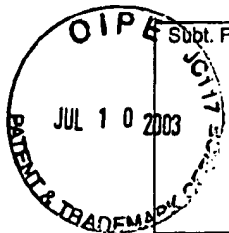
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Sheet	4	OF	21

cdw	5,699,317	12/16/97	Sartore et al.	365	230.06	
	5,271,862	02/24/98	Sartore et al.	395	445	
	5,781,717	07/14/98	Wu et al.	395	182.06	
	5,875,451	02/23/99	Joseph	711	105	
	5,887,272	03/23/99	Sartore et al.	711	105	
	6,038,637	03/14/00	Berube et al.	711	105	
	6,049,856	04/11/00	Bolyn	711	168	
	6,088,760	07/11/00	Walker et al.	711	104	
	6,226,722 B1	05/01/01	Shippy et al.	711	168	
	6,233,665 B1	05/15/01	Bolyn	711	168	
	5,444,651	08/22/95	Yamamoto et al.	365	108	
	6,031,756	02/29/00	Gimzewski et al.	365	151	
	3,448,302	06/03/69	Shanefield	307	318	
	4,845,533	07/04/89	Pryor et al.	357	2	
cdw	4,876,667	10/24/89	Ross et al.	365	113	

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EXAMINER INITIAL	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO
cdw	0 613 130 A1	08/31/94	EP			✓	TECHNOLOGY CENTER 2800 JUL 4 2003
	0 665 187 A1	08/02/95	EP				
	0 665 187 B1	12/29/97	EP				
	0 989 579 A3	03/29/00	EP				
	0 945 402 A1	09/29/00	EP				
	0 947 466 A1	10/06/99	EP				
	0 989 579 A3	03/29/00	EP				
	1 046 613 A2	10/25/00	EP				
	1 052 520 A1	11/15/00	EP				
	1 054 249 A1	11/22/00	EP				
	1 059 266 A3	12/20/00	EP				
1 061 040 A1	12/20/00	EP					
1 061 043 A1	12/20/00	EP					
1 061 044 A1	12/20/00	EP					
1 061 544 A1	12/20/00	EP					
cdw	1 061 555 A1	12/20/00	EP			✓	

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December 28, 2001Group Art Unit  
~~2818~~ 2824

Sheet 5 OF 21

cdw	1 069 206 A2	01/17/01	EP		
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	1 100 106 A2	05/16/01	EP		
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	WO 96/38410	12/05/96	PCT		
	WO 97/09272	03/13/97	PCT		
	WO 97/43473	11/20/97	PCT		
	WO 98/26871	06/25/98	PCT		
	WO 98/39250	09/11/98	PCT		
	WO 98/48456	10/29/98	PCT		
	WO 99/06618	02/11/99	PCT		
	WO 99/47570	09/23/99	PCT		
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Other Documents (Including Author, Title, Date Pertinent Pages, Etc.)

A1 Winslow, Troy. "Advanced+ Boot Block World's First 0.18-Micron Flash Memory." Flash Products Group. April 17,

EXAMINER

Christian Wilson

DATE CONSIDERED

3/11/04

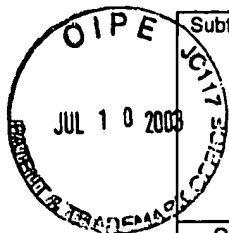
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Sheet	6	OF	21

	2000.
A2	"Double Sided 4Mb SRAM Coupled Cap PBGA Card Assembly Guide." International Business Machines Corp. (IBM), 1998.
A3	Tyagi <i>et al.</i> "A 130nm Generation Logic Technology Featuring 70nm Transistors, Dual Vt Transistors and 6 Layers of Cu Interconnects." Portland Technology Development.
A4	"Preliminary: 8Mb (256Kx36 & 512Kx18) and 4Mb (128Kx36 & 256Kx18) (IBM0418A8CBLBB, IBM0418A4CBLBB, IBM0436A8CBLBB, IBM0436A4CBLBB)." International Business Machines Corp. (IBM), 1998.
A5	Wei, Chengyu <i>et al.</i> "Temperature and Stain-Rate Dependent Plastic Deformation of Carbon Nanotube."
A6	"Package Mechanicals for USAR ICs." USAR Systems, Inc., 1998.
A7	Dipert, Brian. "Exotic Memories, Diverse Approaches." EDN Magazine. April 26, 2001, 56-70.
A8	Duan, Xiangfeng. "Indium Phosphide Nanowires as Building Blocks for Nanoscale Electronic and Optoelectronic Devices." Nature (2001); 409: 66-69.
A9	Yang. "A High Performance 180 nm Generation Logic Technology." Portland Technology Development.
A10	Dai, Hongjie. "Controlled Chemical Routes to Nanotube Architectures, Physics, and Devices." The Journal of Physical Chemistry B (1999); 103: 11246-11255.
A12	Callaby, D. Roy <i>et al.</i> "Solid State Memory Study Final Report." National Media Lab, Feb. 1994.
A13	Cui, Yi. "Doping and Electrical Transport in Silicon Nanowires." The Journal of Physical Chemistry B (2000); Vol. 104, No. 22: 5213-5216.
A14	Li, Mingtao <i>et al.</i> "Direct Three-dimensional Patterning Using Nanoimprint Lithography." Applied Physics Letters (2000); Vol. 78, No. 21: 3322-3324.
A15	"8 Mb Synchronous Communication SRAM (IBM0418A86LQKA, IBM0418A86SQKA, IBM0436A86LQKA, IBM0436A86SQKA)." International Business Machines Corp. (IBM), 1999.
A16	Dipert, Brian. "Memory Cards: Designing with a Full Deck." EDN Magazine. May 25, 2000.
A17	Schönenberger, Christian <i>et al.</i> "Physics of Multiwall Carbon Nanotubes." Physics World. April 4, 2000.
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A19	"Nanochip NC800SX, 0.8 Gbyte Molecular Memory IC (R/W), Nanochip NC200SX, 0.2 Gbyte Molecular Memory IC (R/W), Nanochip NCM4510SX, Molecular Array Read/write Engine, Low Voltage Thermal Actuated, Dynamic Media Series M2, Nanochip NC4525DX, A/D-D/A Interface, Preliminary Specifications, Advance Information, 1996-2000 Nanochip Document NCM2230500."
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A21	Ouyang, Min. "Atomically Resolved Single-Walled Carbon Nanotube Intramolecular Junctions." Science (2001); 291: 97-100.
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A23	Wong, Eric <i>et al.</i> "Nanobeam Mechanics: Elasticity, Strength, and Toughness of Nanorods and Nanotubes." Science (1997); 277: 1971-1975.
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A26	Kim, Philip <i>et al.</i> "Nanotube Nanotweezers." Science (1999); 286: 2148-2150.
A27	Huang, Yu <i>et al.</i> "Directed Assembly of One-Dimensional Nanostructures into Functional Networks." Science (2001); 291: 630-33.
A28	Cui, Yi <i>et al.</i> "Functional Nanoscale Electronic Devices Assembled Using Silicon Nanowire Building Blocks." Science (2001); 291: 851-53.
A29	Ouillette, Jennifer. "Exploiting Molecular Self-Assembly." The Industrial Physicist. American Institute of Physics, December 2000.
A30	Peng, Shu <i>et al.</i> "Chemical Control of Nanotube Electronics." Nanotechnology (2000); 11: 57-60.
A31	"The Ultimate Memory Guide." Kingston Technology (1998).
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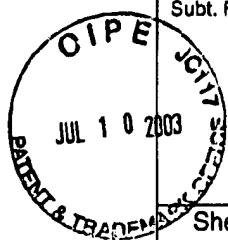
U.S. Patent Documents						
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dw	4,324,814	4/13/82	Reichert	427	86	
	4,378,629	4/5/83	Bozlev et al.	29	580	
	4,495,511	1/22/85	Yoder	357	22	
	4,510,016	4/9/85	Chi et al	156	643	
	4,673,474	06/16/87	Ogawa	204	157.64	
	4,707,197	11/17/87	Hensel et al.	437	189	
	4,758,534	7/19/88	Derkits Jr. et al.	437	89	
	4,901,121	2/13/90	Gibson et al.	357	15	
	4,903,090	2/20/90	Yokoyama	357	22	
	4,939,556	07/03/90	Eguchi et al.	357	4	
	5,010,037	4/23/91	Lin et al.	437	200	
	5,032,538	7/16/91	Bozler et al.	437	83	
	5,057,883	10/15/91	Noda	357	22	
	5,089,545	02/18/92	Pol	524	17	
	5,155,561	10/13/92	Bozler et al.	357	22	
	5,168,070	12/1/92	Luth	437	31	
dw	5,175,597	12/29/92	Cachier et al.	257	267	

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Foreign Patent Documents							
EXAMINER INITIAL	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO
dw	WO 98/42620 -	10/01/98	WIPO	—	—		
	WO 00/09443 -	02/24/00	WIPO	—	—		
	WO 00/17101 -	03/20/00	WIPO	—	—		
dw	WO 00/19494 -	04/06/00	WIPO	—	—		

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	A2	Kong, Jing; Chongwu Zhou; Erhan Yenilmez; Hongjie Dai. "Alkaline metal-doped n-type semiconducting nanotubes as quantum dots." <i>Applied Physics Letters</i> (11 Dec. 2000): 3977 - 3979.
	A3	Tombler, Thomas W.; Chongwu Zhou; Jing Kong; Hongjie Dai. "Gating individual nanotubes and crossed with scanning probes." <i>Applied Physics Letters</i> (24 April 2000): 2412 - 2414.
dw	A4	Zhou, Chongwu; et al. "Electrical measurements of individual semiconducting single-walled carbon nanotubes of various diameters." <i>Applied Physics Letters</i> (20 March 2000): 1597 - 1599.

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	5,453,970	09/26/95	Rust et al.	396	176	
	5,475,341	12/12/95	Reed	327	566	
	5,563,424	10/8/96	Yang et al.	257	40	
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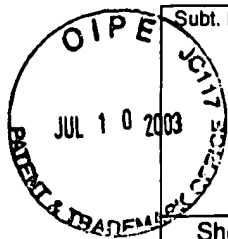
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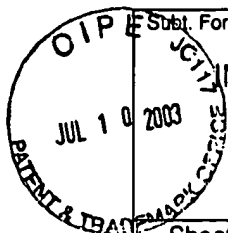




Subt. For, PTO-1449		Docket Number 112020.127 NAN-4	Application Number 10/033,323
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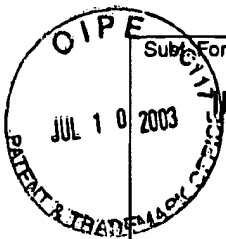
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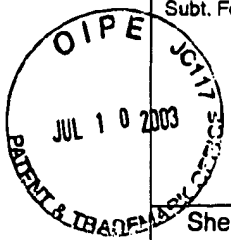
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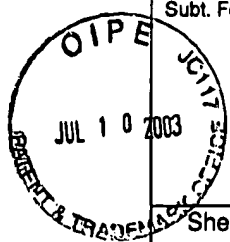
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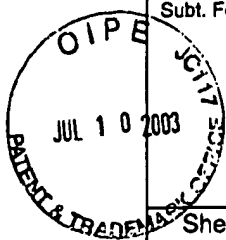
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Subt. For, PTO-1449		Docket Number 112020.127 NAN-4	Application Number 10/033,323
INFORMATION DISCLOSURE IN AN APPLICATION  (Use several sheets if necessary)		Applicant Thomas Rueckes et al.	
		Filing Date December 28, 2001	Group Art Unit 2818-2821
Sheet	14	OF	21

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				Applicant <b>Thomas Rueckes et al.</b>	
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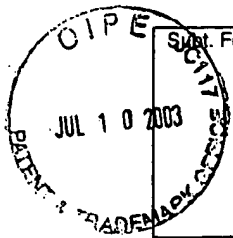
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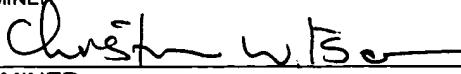
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Subt. For, PTO-1449

INFORMATION DISCLOSURE  
IN AN APPLICATION

(Use several sheets if necessary)

Sheet 17 OF 21

Docket Number  
112020.127 NAN-4Application Number  
10/033,323Applicant  
Thomas Rueckes et al.Filing Date  
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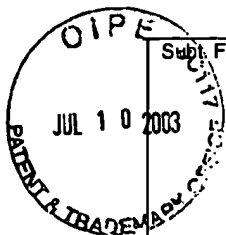
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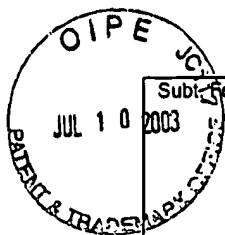


Subj. For, PTO-1449				Docket Number 112020.127 NAN-4		Application Number 10/033,323	
INFORMATION DISCLOSURE IN AN APPLICATION  (Use several sheets if necessary)				Applicant Thomas Rueckes et al.			
				Filing Date December 28, 2001		Group Art Unit 2818 2824	
Sheet	18	OF	21				

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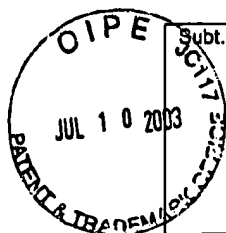
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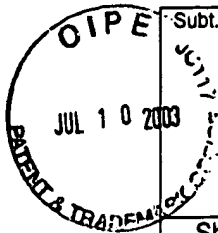
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Subt. For, PTO-1449				Docket Number 112020.127 NAN-4		Application Number 10/033,323	
INFORMATION DISCLOSURE IN AN APPLICATION  (Use several sheets if necessary)				Applicant Thomas Rueckes et al.			
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Sheet	1	OF	3		

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EXAMINER INITIAL	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	YES	NO	
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Sheet	3	OF	3

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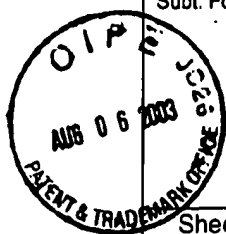
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Sheet	1	OF	1				

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